

## REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 1-17 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw his rejections in view of the amendments and remarks as set forth below.

### REJECTION UNDER 35 U.S.C. § 103

Claims 1-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Peterson (U.S. Pat. No. 3,860,930) or Fitzpatrick (U.S. Pat. No. 4,635,067) in view of Murakoshi et al. (U.S. Pat. No. 5,517,204) and Sefton (U.S. Pat. No. 4,831,384). This rejection is respectfully traversed.

At the outset, Applicants have amended independent Claims 1, 4, 7, and 9 to now include language that a "main reflector is fixedly supported relative to said platform," and "said azimuthal axis is maintained forwardly of said main reflector at all times during rotation of said main reflector." Accordingly, the point of rotation is now described to always be forward of the main reflector as the main reflector rotates. As such, the swept volume required for rotation of the main reflector is reduced. The present invention places the azimuth axis in front of the main reflector at all times to better accommodate the rotary joint, as well as to minimize height and electrical wiring considerations.

Peterson '930 or Fitzpatrick '067 fail to teach or suggest a main reflector fixedly supported on a platform, and wherein the main reflector is rotated about a point

forwardly of the azimuthal axis of rotation of said main reflector at all times of rotation of the main reflector.

In contrast, Peterson '930, in Figure 5, shows the antenna 40 attached to shaft 48, which is coincident with the front face of the reflector antenna 40.

Motor 54 has an output shaft 52 that is coupled to arm 50. Arm 50 rotates the moves planetary gear 46 within gear 44 (Col. 3, lines 66 to Col. 4, lines 1-2). The antenna is attached to shaft 48 which is fixed to planetary gear 46. The arm 50 attached to shaft 52 is rotatably attached to shaft 48. However, the center of rotation remains at shaft 48, which the antenna is fixed to. As the antenna rotates, the antenna is not continuously located forwardly of the azimuthal axis of rotation of the antenna, (i.e., output shaft 52) at all times during rotation.

Fitzgerald '067 is generally directed to a retractable airborne radar pod that houses a radar scanner. Fitzgerald '067 generally involves a radar dish mounted for rotation about a vertical axis in a (non-rotating) radome, flexible plastic diaphragms that cover sides of the radome that are cut away, wherein the radome is mounted on a pylon and deployed by means of a linkage. As such, when deployed, the radome is pressurized to inflate the diaphragms so that the radar aerial may be rotated about the vertical axis to sweep the volume (Col. 4, lines 1-12 and Figures 6a-6d).

Applicants submit that both the Peterson '930 and Fitzgerald '067 references are different than the claimed invention and that they both provide different design approaches, as well as being directed to solving different problems. The antenna in Peterson '930 rotates about shaft 48, which is located coincident with the face of the antenna and not forwardly as claimed. Basically, the point of rotation in the Peterson

'930 reference does not rest forwardly of the antenna at all times during rotation of the antenna aperture to reduce the swept volume in the manner as achieved by the present invention. As for the Fitzgerald '067 reference, Fitzgerald '067 discloses that the radome in which the radar dish is mounted on does not rotate. The radome needs to be pressurized to inflate diaphragms so that the dish may rotate about a vertical axis. Fitzgerald '067 makes no reference to having a main reflector fixedly supported on a platform and in communication with a rotary joint such that the main reflector rotates about the joint and about the azimuthal axis of rotation and wherein the main reflector is rotated about a point forwardly of the azimuthal axis of rotation of said main reflector at all times of rotation of the main reflector.

Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Applicants note that claims 2-3, 5-6, 8, and 10-17 depend from independent claims 1, 4, 7, and 9 which are now believed to be patentable and in condition for allowance. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

#### CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt

and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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